IN THE CLAIMS

Please cancel Claims 32-35, without prejudice or disclaimer of subject matter.

Please amend Claims 1-4, 6-21, 23-27, 30-31 and 36 and add new Claims 37-39, as indicated below. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

1. (Currently Amended) A method of scrambling a digital signal, comprising the steps of:

decomposing the digital signal into a plurality of ~~several~~ regions, each region containing digital data;

encoding the digital signal in a format comprising header data specific to each region ~~and which comprise~~, the header data including a parameter representing a number of bitplanes of samples of a corresponding region ~~at least one part representing the amplitude of the data of the region considered~~; and

modifying ~~among~~ the parameter to cause an erroneous value of an amplitude of the samples, thereby causing the digital signal to be degraded ~~header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered, said modifying resulting in an erroneous value for the amplitude of the data upon decoding~~.

2. (Currently Amended) A method according to claim 1, wherein

the digital data of the digital signal are digital samples representing physical quantities, and

wherein the ~~part of the header data representing the amplitude of the samples of the region considered provides a~~ number of bitplanes includes a number of zero bitplanes and a number of non-zero bitplanes, and the number of bitplanes ~~according to which the amplitudes of the samples~~ are encoded based on the difference between (1) a number of reference bitplanes~~, depending on the signal and which is deduced from information present in the signal~~ and (2) [[a]] the number of zero bitplanes ~~which is contained in the part of the header data~~.

3. (Currently Amended) A method according to claim [[2]] 1, wherein said modifying step includes modifying a portion of the parameter representing ~~providing for modifying~~ the number of zero bitplanes.

4. (Currently Amended) A method according to claim 3, wherein said modifying step includes ~~providing for~~ increasing the portion of the parameter representing the number of zero bitplanes.

5. (Canceled).

6. (Currently Amended) A method according to claim [[1]] 36, wherein the transformation key Ku depends on the at least one region considered.

7. (Currently Amended) A method according to claim [[1]] 36, further comprising the step of generating ~~wherein said modifying step involves in particular the generation of~~ a pseudo-random sequence based on the at least one transformation key Ku.

8. (Currently Amended) A method according to claim [[1]]36, further comprising a step of transmitting the at least one transformation key Ku onto a network to a receiver.

9. (Currently Amended) A method according to claim 1, further comprising a step of transmitting the digital signal after said encoding and modifying ~~so scrambled~~.

10. (Currently Amended) A method of descrambling a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon

decoding ~~and which comprise at least one part representing the amplitude of the data of the region considered~~, the method comprising the steps of:

receiving the digital signal ~~of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal, the modification resulting in an erroneous value for the amplitude of the data upon decoding~~; and

modifying in reverse the modified version of the parameter ~~part of the header data in order~~ to restore the parameter representing a number of bitplanes of samples of a corresponding region ~~unmodified part of the header data of the signal~~.

11. (Currently Amended) A method according to claim 10, wherein

the digital data of the digital signal are digital samples representing physical quantities, and

wherein the modified version of a parameter includes ~~part of the header data representing the amplitude of the samples of the region considered provides~~ a modified number of bitplanes including a modified number of zero bitplanes and a number of non-zero bitplanes, and the modified number of bitplanes ~~according to which the amplitudes of the samples~~ are encoded based on the difference between (1) a number of reference bitplanes~~, depending on the signal and which is deduced from information present in the signal~~ and (2) [[a]] the modified number of zero bitplanes ~~which is contained in the part of the header data~~.

12. (Currently Amended) A method according to claim 11, wherein said step of modifying in reverse includes ~~modifying provides for~~ modifying the modified number of zero bitplanes.

13. (Currently Amended) A method according to claim 12, wherein said step of reverse modifying ~~provides for~~ includes reducing the modified number of zero bitplanes.

14. (Currently Amended) A method according to claim 10, wherein said step of reverse modifying ~~makes~~ uses [[of]] at least one transformation key Ku to determine at least one region of the digital signal that has been encrypted.

15. (Currently Amended) A method according to claim 14, wherein said the transformation key Ku ~~depends on the~~ corresponds to a number of resolutions of the at least one region ~~considered~~.

16. (Currently Amended) A method according to claim 14, wherein said step of reverse modifying ~~involves in particular the generation of~~ includes generating a pseudo-random sequence based on the transformation key Ku.

17. (Currently Amended) A method according to claim 14, further comprising ~~a prior step of~~ receiving the transformation key Ku from a transmitter.

18. (Currently Amended) A device for scrambling a digital signal, comprising:

a processor coupled to a memory storing code, which when executed by the processor, causes the processor to perform the steps of:

~~means for~~ decomposing the digital signal into a plurality of ~~several~~ regions, each region containing digital data;

~~means for~~ encoding the digital signal in a format comprising header data specific to each region ~~and which comprise~~, the header data including a parameter representing a number of bitplanes of samples of a corresponding region ~~at least one part representing the amplitude of the data of the region considered~~; and

~~means for~~ modifying, ~~among~~ the parameter to cause an erroneous value of an amplitude of the samples, thereby causing the digital signal to be degraded ~~header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered, the modifying resulting in an erroneous value for the amplitude of the data upon decoding~~.

19. (Currently Amended) A device according to claim 18, wherein the digital data of the signal are digital samples representing

physical quantities, and

wherein the ~~part of the header data representing the amplitude of the samples of the region considered provides a~~ number of bitplanes includes a number of zero bitplanes and a number of non-zero bitplanes, and the number of bitplanes ~~according to which the amplitudes of the samples~~ are encoded based on the difference between (1) a number of reference bitplanes~~, depending on the signal and which is deduced from information present in the signal~~ and (2) [[a]] the number of zero bitplanes ~~which is contained in the part of the header data~~.

20. (Currently Amended) A device according to claim [[19]] 18, wherein said modifying ~~means modify~~ modifies a portion of the parameter representing the number of zero bitplanes.

21. (Currently Amended) A device according to claim 20, wherein said modifying ~~means~~ increases the portion of the parameter representing the number of zero bitplanes.

22. (Canceled).

23. (Currently Amended) A device according to claim [[18]] 37, wherein the transformation key Ku depends on the at least one region considered.

24. (Currently Amended) A device according to claim [[20]] 37, wherein the memory further stores code, which when executed by the processor performs the step of ~~further comprising means for~~ generating a pseudo-random sequence based on the transformation key Ku.

25. (Currently Amended) A device according to claim [[18]] 37, further comprising a transmitter operable to transmit ~~means for transmitting~~ the transformation key Ku.

26. (Currently Amended) A device according to claim 18, further comprising a transmitter operable to transmit ~~means for transmitting~~ the digital signal after said encoding and modifying ~~so scrambled~~.

27. (Currently Amended) A device for descrambling a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an

erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding ~~and which comprise at least one part representing the amplitude of the data of the region considered~~, the device comprising:

a processor coupled to a memory storing code, which when executed by the processor, causes the processor to perform the steps of:

~~means for~~ receiving the digital signal ~~of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal, the modification resulting in an erroneous value for the amplitude of the data upon decoding~~; and

~~means for~~ reverse modifying the modified version of the parameter ~~part of the header data in order~~ to restore the parameter representing a number of bitplanes of samples of a corresponding region ~~unmodified part of the header data of the signal~~.

28. (Previously Presented) A communication apparatus, comprising a device for scrambling a digital signal according to claim 18.

29. (Previously Presented) A communication apparatus, comprising a device for descrambling a digital signal according to claim 27.

30. (Currently Amended) A[[n]] computer-readable medium ~~information storage means~~ which can be read by a computer or a microprocessor, the computer-readable medium storing ~~containing~~ code instructions of a computer program, which when executed by the computer or microprocessor, cause the computer or microprocessor to execute ~~for executing~~ the steps of a method of scrambling a digital signal, the method comprising the steps of:

decomposing the digital signal into a plurality of ~~several~~ regions, each region containing digital data;

encoding the digital signal in a format comprising header data specific to each region ~~and which comprise~~, the header data including a parameter representing a number of bitplanes of samples of a corresponding region ~~at least one part representing the amplitude of the data of the region considered~~; and

modifying ~~among~~ the parameter to cause an erroneous value of an amplitude of the sampels, thereby causing the digital signal to be degraded ~~header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered~~.

31. (Currently Amended) A[[n]] computer-readable medium information storage means which can be read by a computer or a microprocessor, the computer-readable medium storing ~~containing~~ code instructions of a computer program, which when executed by the computer or microprocessor, cause the computer or microprocessor to execute ~~for~~

~~executing~~ the steps of a method of descrambling a digital signal decomposed into a plurality of regions, each region containing digital data, the digital signal being encoded in a format comprising header data specific to each region, the header data including a modified version of a parameter representing a number of bitplanes of samples of a corresponding region, the parameter having been modified to cause an erroneous value of amplitude samples to cause the digital signal to be degraded upon decoding ~~and which comprise at least one part representing the amplitude of the data of the region considered~~, the method comprising the steps of:

receiving the digital signal ~~of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal~~; and

modifying in reverse the modified version of the parameter ~~part of the header data in order~~ to restore the parameter representing a number of bitplanes of samples of a corresponding region ~~unmodified part of the header data of the signal~~.

32. (Canceled).

33. (Canceled).

34. (Canceled).

35. (Canceled).

36. (Currently Amended) A method according to claim 1, further comprising:

~~wherein said modifying step includes making use of~~ generating at least one transformation key Ku.

37. (New) A device according to claim 18, wherein the code further contains instructions for causing the processor to perform the step of generating at least one transformation key Ku.

38. (New) The method according to Claim 7, wherein modifying the parameter is performed in accordance with:

$BPN'(CBi)=[BPN(CBi)+AL(i)]$, where $AL(i)$ $[0,M]$,

where $BPN'(CBi)$ is the parameter providing a number of zero bitplanes encoded in the packet header data for corresponding region CBi, $AL(i)$ is a value of the pseudo-random sequence, $BPN(CBi)$ is a parameter providing a number of zero bitplanes, M is an integer representing a modulation parameter, and i is an integer.

39. (New) The device according to Claim 24, wherein modifying the parameter is performed in accordance with:

$$BPN'(CBi)=[BPN(CBi)+AL(i)], \text{ where } AL(i) \in [0,M],$$

where BPN'(CB*i*) is the parameter providing a number of zero bitplanes encoded in the packet header data for corresponding region CB*i*, AL(*i*) is a value of the pseudo-random sequence, BPN(CB*i*) is a parameter providing a number of zero bitplanes, M is an integer representing a modulation parameter, and *i* is an integer.